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***WATER QUALITY TESTING***

***FOR***

***GENEVA COMMUNITY UNIT SCHOOL DISTRICT 304***

***GENEVA, ILLINOIS***

***MAY 2 AND 3 , 2018***

***PROJECT NUMBER: 17-18349***



A DIVISION OF GALLAGHER BASSETT SERVICES, INC.

1550 Hubbard Ave., Batavia, IL 60510, 630-879-3006

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## **INTRODUCTION**

Geneva Community Unit School District 304 implemented a proactive program of water testing. Initial sampling was conducted in September of 2017 which identified several sources with lead concentrations exceeding the Lead in Drinking Water Testing Bill (LDWTB) reporting limit (5.0 ppb) and the USEPA's recommended action level (20.0 ppb) at the following schools:

- Harrison Elementary School
- Mill Creek Elementary School
- Western Avenue Elementary School
- Friendship Station.

The District performed corrective action and mitigation and all sources that exceeded the LDWTB reporting limit were re-sampled.

Re-sampling was conducted by Mr. Dan Petras of Aires Consulting. Mr. Geoffrey J. Bacci II, P.E. designed this study and developed this report.

This report contains a summary of results. Individual reports are also issued by school building.

## **BACKGROUND INFORMATION**

The Lead in Drinking Water Testing Bill (LDWTB) was signed into law effective January 17, 2017. The bill amends six (6) different Illinois Codes and Acts including:

- The Illinois School Code
- Illinois Plumbing License Law.

The LDWTB requires school buildings constructed prior to January 1, 2000 to test drinking water sources for lead and provide written notification of the results. A summary of the LDWTB requirements includes:

- All schools housing 5<sup>th</sup> grade and under built before 1/1/2000 must test sources used for drinking and cooking.
- Results of tests that are 5 parts per billion (ppb) or less can be communicated to parents at minimum by website posting.
- Locations that have results over 5 ppb must be communicated in writing or electronically to affected parents. That communication should also include information on the USEPA website that parents can access for guidance. That website: <https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water>

According to the LDWTB the testing and notification requirements apply only to covered sources which are:

- Drinking fountain and drinking sources in buildings for grade 5 and under
- Classroom sinks in grades below 1 (kindergarten and pre-kindergarten).

Aires recommends notification extends to all sources tested.

Lead most frequently gets into drinking water by leaching from plumbing materials and fixtures as water moves through a school's distribution system. Even though the drinking water you receive from your water supplier meets federal and state standards for lead and copper, your facility may have elevated lead levels due to plumbing materials and water use patterns. Leaching can occur for several reasons but the most significant is corrosion which can occur if water is acidic. Acidic water has a pH less than 7.0

Lead in new plumbing and plumbing repairs was banned in 1986. This ban did not entirely eliminate lead as 0.2% lead is still allowed in solder and 8% lead is allowed in piping systems. Pre-1986 plumbing systems have a higher potential to leach lead into drinking water.

Lead is a toxic metal that is harmful to human health. Young children, those 6 years and younger, are at particular risk for lead exposure because they have frequent hand-to-mouth activity and absorb lead more easily than do adults. Children's nervous

systems are still undergoing development and thus are more susceptible to the effects of toxic agents. Lead is also harmful to the developing fetuses of pregnant women.

## **METHODOLOGY**

Water testing followed protocol recommended by IDPH and the LDWTB. All water sources have two samples collected. The first collection at each source is a “first draw” sample. Water collection occurs in first draw samples after sources were unused for at least eight (8) hours but not more than 18 hrs. The second sample at that source is collected after 30 seconds of flushing. Each sample is given an identifier which begins with letters that identify the school. The middle letters identify the sample as a drinking fountain (WF), classroom sink (CS) or any other sink (S). Letters identify the sample location. An “A” after the letter indicates a first draw sample and a “B” identifies a flush sample. For example sample HWF-12A was collected at location 12 at Harrison Elementary School and is a first draw sample at a water fountain.

Samples were analyzed by Suburban Laboratories, Inc. Suburban Laboratories is accredited by the National Environmental Laboratory Environmental Conference (NELAC).

The USEPA recommends taking action to reduce lead levels if sample results exceed 20 ppb. That action could include water treatment or fixture replacement.

Public water supplies are required by the Safe Drinking Water Act to take corrective action if 10% or more of their sources contain lead levels greater than 15 ppb.

## **RESULTS**

The following locations are results that exceeded 5 ppb. Locations that exceeded the EPA action level of 20 ppb are shown in **bold print**.

### **Harrison:**

- HCS-1A: first draw sample from the sink in Classroom 101 - 7.14 ppb

- HS-41A: first draw sample from the sink in Room 132 - 12.6 ppb
- HCS-57A: first draw sample from the northeast sink in Classroom 160 - 9.33 ppb
- HCS-73A: first draw sample from the sink in Classroom 274 - 9.21 ppb
- **HWF-74A: first draw sample from the water fountain in the hallway adjacent Room 161 – 34.9 ppb**
- HS-75A: first draw sample from the sink in the Copy Room 181 – 5.43 ppb

**Mill Creek:**

- MCS-7A: first draw sample from the classroom sink in Room 172 – 5.71 ppb
- MWF-9A: first draw sample from the drinking fountain in Classroom 174 - 6.13 ppb
- MCS-10A: first draw sample from the classroom sink in the Room 174 – 7.02 ppb
- MCS-13A: first draw sample from the classroom sink in the Room 175 – 7.54 ppb
- MWF-14A: first draw sample from the drinking fountain in Classroom 175 - 6.82 ppb
- MCS-16A: first draw sample from the classroom sink in the Room 173 – 9.96 ppb
- MS-19A: first draw sample from the sink in the Nurse's Office – 5.90 ppb
- MS-20A: first draw sample from the bathroom sink in the Nurse's Office – 15.8 ppb
- **MS-24A: first draw sample from the bathroom sink in Classroom 142 – 20.2 ppb**
- MS-27A: first draw sample from the bathroom sink in Classroom 140 – 19.0 ppb

- MCS-54A: first draw sample from the south sink in the Art Room 11 - 7.13 ppb
- MCS-55A: first draw sample from the east sink in the Art Room 11 – 14.4 ppb
- MCS-56A: first draw sample from the north sink in the Art Room 11 - 11.4 ppb
- MWF-60A: first draw sample from the drinking fountain in Classroom 18 – 14.9 ppb
- **MS-74A: first draw sample from the sink at the south end of the Library – 22.1 ppb**

**Western:**

- WS-27.5A: first draw sample from the sink in the LMC Office Room 125B - 5.74 ppb

**Friendship Station:**

All results were non-detectable for lead (<2 ppb).

Drinking fountains that exceed the EPA action level of 20 ppb should be taken out of service. Sinks that exceed the EPA action level of 20 ppb should be taken out of service or labeled to avoid using as a drinking or cooking source. In order to use the sources further investigation and corrective action would be necessary to identify the lead source and identify corrective action to reduce lead levels.

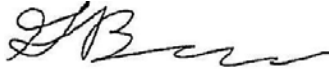
The re-testing results, along with associated corrective action, should be proactively shared with parents or guardians and other stakeholders and at a minimum be posted on the District's website.

**PROFESSIONAL CERTIFICATION**

Aires Consulting, a division of Gallagher Bassett Services, Inc. conducted this study in the interest of Geneva Community Unit School District 304 to assist in meeting environmental obligations and regulations. In this respect, we hope the results of this

study are useful. *This study was not intended to include every environmental exposure that may be present at the facility; only those items specifically addressed in the report were evaluated.* If you have any questions concerning this study please let us know.

Respectfully Submitted,



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Geoffrey J. Bacci II, P.E.  
Director of Operations